

FEATURES

- AHB Master DMA
- AHB Slave Register Interface
- DES/TDES modes supported:
- Electronic Code Book (ECB)
- Cipher Block Chaining (CBC)
- Output Feedback (OF)
- Maskable Interrupt

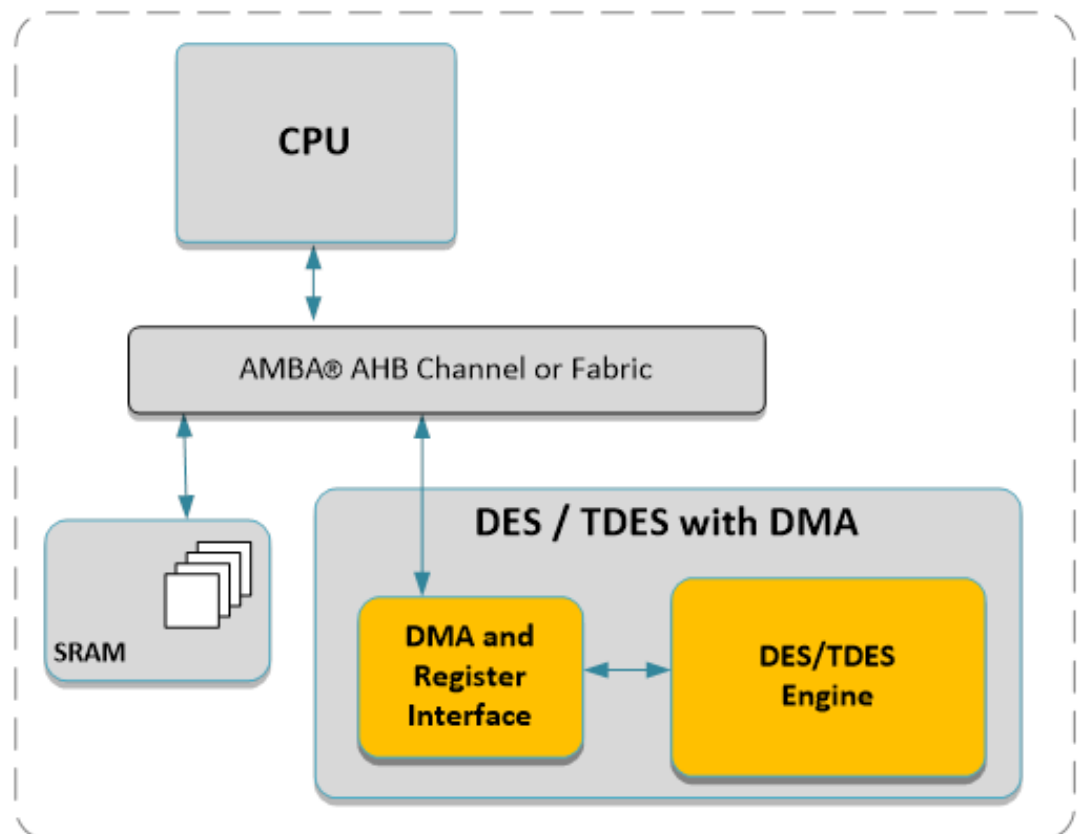
LICENSED IP PACKAGE INCLUDES

- Verilog Source
- Complete Test Environment
- AHB Bus Functional Model
- C-Sample Code

DESCRIPTION

The AHB DES/TDES Encryption/Decryption Engine is a configurable core that interfaces to an AHB microprocessor bus. The Controller encrypts or decrypts blocks of data based on the DES encryption standard. In order to accommodate a wide variety of system requirements, the Engine can be generated in two modes: LowLatency and LowGateCount. For a TDES system, three DES cores are instantiated. The table below summarizes the options and how to implement them. The checked definitions should be defined and the definitions not checked should be commented out. In this table LL refers to Low Latency and LGC refers to Low Gate Count.

GENERAL USE



You may also be interested in:

AMBA® Subsystems

- Low Power Subsystem (simple AHB system)
- Low Power / Performance Subsystem (includes AHB Multi-matrix Fabric)
- Custom Performance Subsystem (includes AXI Multi-layer Fabric)

IP Cores

Infrastructure Cores

AHB Multi-Matrix Fabric
AHB/AHBLite Channel
AHB Arbiter
AXI Multi-Layer Fabric
AXI to AHBLite Bridge
AXI to APB Bridge
AHB to ABP Bridge
APB Channel

AXI Cores

AXI Multi-Layer Fabric
AXI to AHBLite Bridge
AXI to APB Bridge
AXI External Bus Interface
(Memory/Flash Controller)
AXI Internal Memory Controller
AXI QSPI with Execute in Place (XIP)

AHB Cores

AHB Channel
AHB Multi-Matrix Fabric
AHB to ABP Bridge
AHB Arbiter
AHB QSPI with Execute in Place (XIP)
AHB External Bus Interface
AHB Internal SRAM Controller
AHB Interrupt Controller
AHB DMA Controller
AHB DMA 4 Channel Controller
AHB TFT LCD Controller
AHB DES/TDES Encryption/Decryption

AHB Serial Flash Controller
Octal, Quad, Dual and Single Modes

Serial to AHB Bridge
SPI slave to AHB Master
Monitor/Control

APB Cores

APB Channel
APB Quad SPI Controller
APB General Purpose IO
APB Timer
APB UART
APB I2C (Master and Slave)
APB SPI
APB Watchdog Timer
APB Pulse Width Modulator
APB Real Time Clock

General

DES – Digital Encryption Standard
Triple DES (Low Gates)
Triple DES (pipelined)
ADC Interface (semi-custom)
Mixed-Signal Interfaces (semi-custom)
Power Management Unit (semi-custom)

AES Encryption Core

For more information contact



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